

**PATENT APPLICATION**

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**MULTI-GAME SYSTEM**

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Inventor(s):

Bradley W. Johnson  
6275 McLeod Drive, #4  
Las Vegas, NV 89120

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Assignee:

Paltronics, Inc.  
6275 McLeod Drive, #4  
Las Vegas, NV 89120

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25 Entity:

Small

30 Attorney for Applicant(s):

Ian F. Burns, Esq.  
Ian F. Burns & Associates, P.C.  
P. O. Box 20038  
Reno, NV 89515-0038  
Tel: (775) 826-6160  
Fax: (775) 825-6072

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**[01] MULTI-GAME SYSTEM**

10 **[02] CROSS REFERENCES TO RELATED APPLICATIONS**

**[03]** This application claims priority of, and expressly incorporates by reference, U.S. provisional patent application serial number 60/411,441, filed on September 16, 2002.

**[04] Field of Invention**

15 **[05]** The present invention relates to gaming devices, and more particularly to gaming devices that allow a player to play multiple games simultaneously.

**[06] Background**

**[07] Conventional Roulette**

20 **[08]** The game of roulette is well known and is played in most casinos throughout the world. The game is typically played on a physical roulette table. The roulette table comprises a wagering field that allows players to bet on numbers 1 through 36, 0, and 00. The wagering field also allows players to place bets on red, black, odd, or even numbers, numbers between 1 to 18, numbers between 19 to 36, numbers between 1 to 12, 13 to 24, or 25 to 36. The wagering field  
25 further allows several other betting opportunities, the prizes for which are adjusted according to

the odds of the particular bet.

[09] Once players have made their bets, an operator starts the game by setting a white ball in motion around a roulette wheel. The roulette wheel comprises a plurality of sections that can capture the ball. Each section is designated with a number as well as a red, black, or green color.

5 The ball eventually loses speed, and falls into one section. The number of the section on which the ball lands is the number outcome of the game and the color of the section on which the ball lands is the color outcome of the game. The player may be awarded a prize if the player placed a bet on the number or color of the outcome.

[10] Due to the popularity of roulette, gaming operators cannot accommodate all game players  
10 at roulette tables, especially during peak casino hours. Thus, game players are not always able to play the game and casino operators lose revenue. During peak operation, conventional roulette tables also cannot accommodate players who are new to the game. Game operators and players do not want the game to be slowed down. Thus, a beginner will have to miss out on learning complicated betting opportunities. Furthermore, game players are not able to play at their own  
15 pace on conventional roulette tables. At a certain point in a roulette game, the dealer asks all the players to stop betting. However, there are usually many players who have not fully decided which wagers they will place. This prevents these players from placing additional wagers, which in turn deprives them of an opportunity to play the game and deprives the operator of additional revenue.

20 [11] Some players perceive roulette as a slow and boring game because of the time it takes to operate the game. For example, before a new game can be played, players must wait until the dealer collects all losing wagers and award prizes to the winners. In addition, players have to wait for all game players to place their wagers and players have to wait for the operator to set the

ball in motion around the roulette wheel. Because of all the waiting involved for every roulette spin, some players prefer to play games besides roulette that are quicker to play from start to finish. The more games a player can play within a given period of time, the better the odds are for winning. For this reason, game players desire to be able to play multiple roulette games at the same time.

[12] Additionally, some players dislike the odds for being able to pick a winning number out of 38 possible indicia. Thus, many players desire to have several bets or games going at the same time so that if one game fails to win, then they may win on another game. Alternatively, gaming players desire additional betting opportunities, especially betting opportunities that offer large jackpot prizes, to make the risks they make a little more justifiable.

**[13] Simultaneous Multi-Game Systems**

[14] U.S. Patent Number 6,007,066 and its related applications disclose a method of card play in which at least two rows of cards are dealt to a player. U.S. Patent Number 5,954,335 and its related applications disclose a game of twenty-one in which the player has the opportunity to play his first two cards multiple times. Thus, prior art discloses systems that allow a player to play several games at the same time. However, prior art fails to solve a number of problems and fails to satisfy a number of needs.

[15] For example, people who long to join a crowded gaming table still could not be accommodated. The present invention accommodates these people by providing these live games on display devices and by allowing people to play the games just as they would normally play them. The present invention further provides an option for the player to obtain gaming lessons.

[16] Another unmet need is for simultaneous multi-game systems to allow players to make specialty bets based upon the probability of events happening across multiple games.

Additionally, an unmet need exists for a simultaneous multi-game system that allows player to initially pick an indicia and wagering amount (hereinafter referred to as “wagering scheme”) and  
5 apply same exact wagering scheme throughout multiple games. Finally, an unmet need exists for a simultaneous multi-game system that provides a master betting layout that is familiar to the player and is not evaluated for winning or losing. Such betting layout remains throughout the games and provides guidance to new players to play the game and enables experienced players to remember available wager types or styles.

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## [17] SUMMARY

### [18] Advantages of Certain Embodiments of the Invention

[19] The various embodiments of the present invention may, but do not necessarily, achieve one or more of the following advantages:

15 [20] An advantage of certain embodiments of the present invention is that it provides a gaming device that adds player satisfaction and excitement.

[21] Another advantage of certain embodiments of the present invention is that it provides a gaming device that allows a game player to have several bets or games going at the same time without confusing or slowing down play.

20 [22] Another advantage of certain embodiments of the present invention is that it provides a game that allows additional betting opportunities.

[23] Another advantage of certain embodiments of the present invention is that it provides a chance for players to win large jackpot amounts.

[24] Another advantage of certain embodiments of the present invention is that it provides a gaming device that allows a game player to play multiple games simultaneously. For example, player may play three roulette games at the same time.

[25] Another advantage of certain embodiments of the present invention is that it allows  
5 players to apply the same wagering scheme in multiple games.

[26] Another advantage of certain embodiments of the present invention is that it allows players to experience gaming excitement both in and out of a casino facility.

[27] Another advantage of certain embodiments of the present invention is that it provides a gaming device that allows game operators to offer to players an opportunity to play multiple  
10 games simultaneously without incurring overhead expenditures for dealers or physical gaming tables.

[28] Another advantage of certain embodiments of the present invention is that it allows a game player to play a game at the game player's own pace.

[29] Another advantage of certain embodiments of the present invention is that it provides a  
15 quicker roulette game from start to finish.

[30] Another advantage of certain embodiments of the present invention is that it allows players to play several games at the same time so that if one game fails to generate winnings, the players may win on another game.

[31] Another advantage of certain embodiments of the present invention is that it provides  
20 instant access to popular table games to players.

[32] Another advantage of certain embodiments of the present invention is that it allows game operators to accommodate all players wishing to play popular table games.

[33] Another advantage of certain embodiments of the present invention is that it provides a

game lesson to the game player whenever the game player asks for it.

[34] These and other advantages of certain embodiments of the present invention may be realized by reference to the remaining portions of the specification, claims, and abstract.

5 [35] **Brief Description the Aspects of the Invention**

[36] The present invention comprises a gaming device for allowing a player to play multiple games simultaneously. The gaming device comprises at least one game source, a server in communication with the game source, at least one display device in communication with the server, and at least one input device in communication with the display device. The game source  
10 provides at least one game to the player. The server is configured to combine data to create a set of games for display on display device. The player is allowed to specify games to play and place wagers using the input device. After the games are completed, game outcomes are displayed on the display device.

[37] The above description sets forth, rather broadly, the more important features of the  
15 present invention so that the detailed description of the embodiments that follow may be better understood and contributions of the present invention to the art may be better appreciated. There are, of course, additional features of the invention that will be described below and will form the subject matter of claims. In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the  
20 details of the construction and to the arrangement of the components set forth in the following description or as illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not

be regarded as limiting.

**[38] BRIEF DESCRIPTION OF THE DRAWINGS**

[39] Certain embodiments of the present invention are shown in the following drawings

5 where:

[40] Figure 1 is substantially a perspective view of an embodiment of the present invention.

[41] Figure 2 is substantially an introduction screen display of a display device of the present invention.

10 [42] Figure 3 is substantially a menu screen display of the display device of the present invention.

[43] Figure 4 is substantially a screen display of the display device of the present invention showing a betting layout.

[44] Figure 5 is substantially a screen display of the display device of the present invention showing a wager field.

15 [45] Figure 6 is substantially a screen display of the display device of the present invention showing the results of a game.

[46] Figure 7 is substantially a screen display of the display device of the present invention showing a game in progress.

20 [47] Figure 8 is substantially a screen display of the display device of the present invention showing the results of a game.

[48] Figure 9 is substantially a screen display of the display device of the present invention showing the results of a game.

[49] Figure 10 is substantially a screen display of the display device of the present invention



showing a progressive logo.

[50] Figure 11 is substantially a schematic diagram of components of one embodiment of the present invention.

[51] Figure 12 is substantially a schematic diagram of data flow within components of one  
5 embodiment of the present invention.

[52] Figure 13 is substantially a schematic diagram of components of one embodiment of the present invention.

[53] Figure 14 substantially a schematic diagram of data flow within components of one embodiment of the present invention.

10 [54] Figure 15 is substantially a flow chart of a game start process.

[55] Figure 16 is substantially a flow chart of a game instruction process.

[56] Figure 17 is substantially a flow chart of a place bets process.

[57] Figure 18 is substantially a flow chart of a bet placed process.

[58] Figure 19 is substantially a flow chart of a table selection process.

15 [59] Figure 20 is substantially a flow chart of a remove bets process.

[60] Figure 21 is substantially a bet amounts flow chart.

[61] Figure 22 is substantially a flow chart of a progressive bet process.

[62] Figure 23 is substantially a live game flow chart.

[63] Figure 24 is substantially a simulated game flow chart.

20 [64] Figure 25 is substantially a flow chart of a winner determination flow chart.

[65] Figure 26 is substantially a progressive winner flow chart.

**[66] DESCRIPTION OF CERTAIN EMBODIMENTS OF THE INVENTION**

[67] In the following detailed description of certain embodiments of the invention, reference is made to the accompanying drawings, which form a part of this application. The drawings show, by way of illustration, specific embodiments in which the invention may be practiced. It is to be understood that other embodiments may be utilized and structural changes may be made without departing from the scope of the present invention.

[68] The present invention comprises a method and device for playing a plurality of games simultaneously, which are conventionally played on physical gaming tables. Such games may include roulette, craps, poker, keno, blackjack, baccarat, bingo, pai gow, and the like.

**[69] Gaming Device**

[70] The present invention comprises a gaming device, generally indicated by reference number 20. As shown in figure 1, gaming device 20 comprises display devices 22 and 24 (hereinafter referred to as first display 22 and second display 24) and input device 26. Gaming device 20 may also comprise a coin acceptor (not shown) for receiving coins or tokens, a bill acceptor 28, and a coin tray (not shown). Gaming device 20 further comprises game source (31 shown in figure 11) adapted to provide at least one game to the player.

**[71] Display Devices**

[72] Referring to figure 1, in at least one embodiment, gaming device 20 comprises a plurality of display devices, such as first display device 22 and second display device 24. Display devices 22 and 24 serve several functions, including displaying graphics to attract players to play and providing a user interface for allowing players to play gaming device 20. The user interface may

include displaying game information, such as a wagering field and outcome information. The present invention is not limited to having a fixed number of display devices. Gaming device 20 may comprise a plurality of display devices or a single integrated display device, such as a personal computer monitor for playing a game using a personal computer.

5 [73] Display devices 22 and 24 may be liquid crystal displays, which are well-known in the art. Display devices 22 and 24 may also be plasma screens, cathode ray tubes, or other display devices known in the art. Display devices of different shapes, sizes, and orientation may also be utilized. For example, in figure 1, first display 22 is positioned at a right angle to the horizontal plane and second display 24 is slanted relative to the vertical plane. The configuration of second  
10 display 24 is similar to slant top gaming devices, which are known in the art.

[74] In figure 1, first display 22 and second display 24 are positioned straight relative to a perpendicular plane. First display 22 is preferably encased with a housing designed with a particular theme. For example, as shown in figure 1, first display 22 is encased in a housing 36 designed to appear like a roulette wheel. The theme of the housing may be correlated to the  
15 game that gaming device 20 is configured to offer. Thus, housing 36 can have a theme that is appropriate for playing craps, blackjack, poker, keno, bingo, baccarat, and the like. By providing a theme, players may recognize the type of game gaming device 20 offers.

[75] First display 22 may include other displays devices, such as blinking lights (not shown) and a jackpot/service light 38 displayed on top of first display 22. Ornaments may notify the  
20 player of a game outcome, serve to attract other patrons, and add more excitement to the game. Speakers and other sensory devices may also be provided.

**[76] Input Device**

[77] Gaming device 20 further comprises an input device 24. Input devices are well known in the art and many different devices may be used with the present invention. Input device 24 may include a keyboard, keypad, touch screen, trackball, joystick, electronic pointer, a mouse, one or  
5 more switches or buttons, and a microphone with voice recognition software. In at least one embodiment, such as that shown in figure 1, input device 24 is a touch screen that allows players to input information and commands by touching the screen. Input device 24 serves several functions, including allowing players to place wagers and allowing players to play a game.

10 **[78] Game Play**

[79] Referring now to figure 2, first display 22 (of figure 1) is adapted to display introduction screen 23. Introduction screen 23 comprises messages 40 or graphics 42 that serve to attract players to play gaming device 20. First display 22 (of figure 1) may also present at least one current progressive amount 44 to further attract players to play gaming device 20. Of course, the  
15 types and number of messages and graphics may vary.

[80] Referring now to figure 3, second display 24 (of figure 1) may be configured to display menu screen 46. Menu screen 46 comprises game types 300 and 302, game instructions 304, progressive instructions 306, cash out 308, and credit meter 310. Game types 300 and 302 allow the player to select the type of game to be played. Game instructions 304 allow the player to  
20 view instructions for operating gaming device 20 or instructions on how to play a particular type of game. Progressive instructions 306 provide information related to playing for a progressive prize. Cash out 308 allows the player to end play and receive all of the player's credits. The credits may be dispensed in the form of currency (either coins or bills), a voucher that may be

redeemed at another location, or added to the player's account that is maintained by the operator.

Credit meter 310 may indicate the number of credits held in a virtual bank.

[81] In some embodiments in which input device 24 (of figure 1) is a touch screen, a player may simply touch an area of the screen corresponding to the player's selection. Thus, if the  
5 player desires to obtain game instructions, the player may simply touch game instruction area 304. If the player picks game type 300 or 302, first display 22 changes from introduction screen 23, shown in figure 2, to place your bets screen 25 shown in figure 4. Place your bets screen 25 shows images of game tables 802, 806, and 810 available for the player to play. In at least one embodiment, roulette tables 802, 806, and 810 are shown with corresponding displays of  
10 previous winning numbers 804, 808, and 812, respectively. The number of roulette tables may vary, and roulette tables may either be live, simulated, previously recorded, or animated. Place your bets screen 25 may show progressive jackpot information 814 and 816 to the player.

[82] The player may be provided with a number of games to choose from, and may be allowed to select any number of these games. For example, gaming device 20 may be configured to  
15 present a maximum of ten games to a player. The player could then wager on just one game, all of the games, or a selected number of the games. In one embodiment, that player may be allowed to specifically choose which games the player wishes to play. For example, if the games are actual table games, the player may feel that certain tables are luckier than others and wish to be on the tables the player believes are lucky. Alternatively, the play may be allowed to choose the  
20 number of games to play, but have no control over which specific games those are. Gaming device 20 is not limited to presenting any specific number of games. Gaming device 20 may be configured to present as many or as few games as the operator desires.

[83] Referring now to figure 5, menu screen 46 (see figure 3) of second display 24 changes to

place your bets screen 48 shown in figure 5. The player can go back to menu screen 46 by pressing go to menu icon 426. Place your bets screen 48 comprises credit meter 404 to inform the player of available money the player can wager. To place a bet, the player selects at least one table 406, 408, or 410 on which to place a wager. Alternatively, player can select all tables 412.

5 Next, the player selects a denomination and indicates the selection by pressing icon 418, 420, 422, or 424. Of course, many different denominations may be used. The player may change denomination amounts at any time by selecting a different denomination. The player can now make bets on wagering field 428.

[84] The game player may be allowed to place the same or different wager amounts on each  
10 game they choose to play. For simplicity, certain embodiments only allow a player to choose one wager amount that is then wagered on as many games as the player selects. For example, the player may choose to wager \$0.25. The player may choose to wager on five games. In this example, the player's total wager is \$1.25. The present invention is not limited to any particular wager amount or amounts.

15 [85] In the embodiment shown in figure 5, wagering field 428 may be similar to standard wagering fields used in roulette games. Other types of wagering fields may also be used, such as wagering field for keno, craps, baccarat, bingo, blackjack, poker, pai gow, and the like. Roulette wagering field 428 may include betting areas for individual numbers "1 through 36", red 442, black 444, odd 446, even numbers 448, numbers between "1 to 18" 450, numbers between "19 to  
20 36" 452, numbers between "1 to 12" 454, "13 to 24" 456, "25 to 36" 458, numbers in first row 436, second row 438, or numbers in third row 440.

[86] Roulette wagering field 428 further allows several other betting opportunities as known in the art, for which the prizes are adjusted according to the odds on the type of bet. For example,

player may place a four-number bet for numbers “3,6,2, and 5” by pressing intersection 434 of four numbers. The player may place bets by pressing betting areas. Thus, if the player wants to place a bet on number 7, the player may press number 7. If the player wants to increase the bet on number 7, the player may repeat pressing number 7 until the desired wager is reached. If the  
5 player wants to reduce the bet, the player may press remove last bet icon 432. If the player wishes to change all of the bets, the player may press clear all bets icon 430. In at least one embodiment, each time a bet is placed or changed on wagering field 428, the same bet is also played on all selected tables. As used herein, bet and wagering scheme are used interchangeably to mean indicia picked by the player and amount wagered by player. Bet per table 400, total bet  
10 402, and credit meter 404 are adjusted according to bets the player makes. Of course, additional icons or information can be added to menu screen 46 and place your bets screen 48.

[87] Place your bets screen 48 may allow the player to place a wager on at least one progressive jackpot using progressive bet icon 416. Progressive jackpots are well known in the art and many different kinds of progressive games and systems have been developed. In general,  
15 progressive jackpots operate by contributing a predefined amount of each wager to a progressive jackpot. If a predefined event or outcome occurs, the player wins the progressive prize. In at least one embodiment, the player selects progressive bet icon 416 and then chooses one number on the roulette wagering field 428. The number selected by the player is the outcome that must occur in order for the player to win the progressive jackpot. The player’s credit meter 404 is  
20 charged a predetermined amount for the progressive wager.

[88] In at least one embodiment, the player may place wagers on three roulette table. If the player’s selected number is the outcome on all three roulette tables, then the player wins the progressive jackpot. If the player’s selected number is the outcome on two out of three roulette

tables, then the player wins a medium jackpot. If the player's selected number is the outcome number on only one out of three roulette tables, then player wins a smaller jackpot. Various other prizes may also be awarded in addition to, or in place of, the jackpot prizes. The jackpots may be progressive, random, variable, or predetermined. A progressive jackpot is the amount of  
5 total progressive contribution taken from players who participated in the progressive game. A random jackpot may be a jackpot generated by a random number generator. A variable jackpot may change over time. A predetermined jackpot may be an amount specified by a game operator.

[89] Because the player is allowed to place multiple bets on multiple tables at the same time,  
10 certain embodiments of the present invention may provide a large variety of specialty wagers that have large prizes. The prize for a specialty wager may be a product of the probability of one roulette outcome and the number of tables being played at the same time. Thus, the player is awarded a prize according to the additional amount of risk the player took.

[90] It may be desirable to provide players with an incentive to play a greater portion, or all, of  
15 the games available for play. Doing so may increase revenue for the game operator and create more winning opportunities and excitement for players. For example, as a player plays more games, the player may qualify for larger prize amounts or have the chance to win additional prizes. In at least one embodiment, if the player plays all the games available for play, the player may qualify to play for a progressive prize. In other embodiments, players may be provided with  
20 additional or larger prizes for obtaining winning outcomes on a certain percentage, or all, of the games on which they wagered. The player may also be allowed to select a number of games the player believes will achieve an outcome. For example, if three roulette games were available, they player might be that two of three of the games would produce a result of "7."



[91] To illustrate, suppose on one roulette table, the probability for a red ball outcome is 0.50.

If the player plays a specialty wager on three tables to have a red ball outcome, the probability for all three tables to have a red ball outcome would be reduced to 0.125. By calculating the prize for said specialty wager as a product of the 0.50 and 3, the player may be awarded the

5 regular prize plus an additional 50% for the extra risk the player took.

[92] Among specialty bets contemplated are allowing player to select tables and allowing a player to bet on an exact number of tables that will fall on red. Certain embodiments of the present invention may further provide smaller specialty bets, such as allowing a player to earn a prize if a player picked the right numbers but on the wrong tables.

10 [93] When the player has placed all of the player's bets, including progressive bets, the player presses on done betting icon 414. Betting layout screen 48 changes to game in progress screen 50 shown in figure 6. While a game is in progress, the player waits for roulette spins to be completed for all tables selected. The player can see bet information while the game is in progress. Bet information may include a bet per table listing 500, a total bet listing 502, and a  
15 credit meter 504. In the embodiment shown in figure 6, bet information may include bet per table listing 500 if uniform bets were placed on all tables. Alternatively, bet information may include a listing of the tables and the corresponding bets.

[94] Referring now to figure 7, first display 22 may also change to game in progress screen 27.

Game in progress screen 27 may show a roulette ball 1220, 1222, and 1224 spinning around  
20 moving roulette wheels 1200, 1202, and 1204 to add to the excitement and anticipation of the game. When live games are shown, table status indicators 1210, 1208, and 1206 are preferably shown to keep the player informed as to the status of each live table.

[95] Referring back to figure 6, when a game is completed at each table, winning numbers are

shown 506, 508, and 510 on the game in progress screen 50 of second display 24. After all winning numbers are shown, game in progress screen 50 of second display 24 changes to game results screen 52 as seen in figure 8. Game results screen 52 shows winnings on each table selected 610, 612, and 614. Total credits won 600 and total credits bet 602 information are also provided. The amount on credit meter 604 is adjusted accordingly.

[96] After the player has reviewed the results, the player is given an option to place the same bets 608, place new bets 606, cash out 618, or go to menu screen 616. If the player decides to place the same bets, game results screen 52 changes to game in progress screen 50 shown in figure 6. If player decides to place new bets, game results screen 52 changes to place your bets screen 48 shown in figure 5. If the player decides to go to menu 616, game results screen 52 changes to menu screen 46 shown in figure 3. If the player decides to cash out 618 or the player does not play for a set period of time, game results screen 52 of second display 24 will revert back to menu screen 46 shown in figure 3.

[97] Referring now to figure 9, when roulette games are completed, first display 22 changes to game results screen 29. Game results screen 29 shows winning numbers 1310, 1308, and 1306 to the player. In figure 10, if the player has made a progressive bet and the player has won prizes, first display 22 shows a progressive result screen 31. Progressive result screen 31 may show at least a winning amount 1102.

## [98] Game Sources

[99] Game sources may be live games, including those played on actual game tables, may be prerecorded games, animated games, simulated games, among other source. The present invention is not limited to any particular game source or sources. The games may be in close

proximity to each other, and to gaming device 20. The gaming devices may also be remote from each other, and gaming device 20. For example, a number of game sources could be connected of a network such a local area network (LAN), a wide area network (WAN), or even over the internet. In certain embodiments, a number of gaming devices 20 may communicate to allow a  
5 tournament, or competition, where different players can compete against each other.

**[100] Game Source for Live Game Embodiment**

[101] Referring now to figures 11 and 12, one embodiment of the present invention is shown  
10 wherein gaming device 20 offers at least one live game for the player to play. The number of live games being offered by gaming device 20 may vary. Gaming device 20 is connected to at least one game source. The term “game source” refers to an origin of a game or games being offered to the player and the devices used to capture the origin and relay the captured game or games to the player. A game source may be a live game, a previously recorded game, or an animated  
15 game. The devices used to capture the game and relay the captured game or games to the player may include video cameras, video processors, servers, memory storage, recorders, players, computers, and the like.

[102] As shown in figure 11, one embodiment of gaming device 20 comprises video camera 30, capturing at least one live game. Video camera 30 captures activities happening on a  
20 physical game table. In at least one embodiment, conventional roulette tables 10 are tables on which live games are being played. However, as discussed above, game tables other than roulette may be used.

[103] Video camera 30 sends video image of the live game to a corresponding video processor

32. Video camera 30 and video processor 32 may be attached using methods known in the art, such as video cable, and by later develop methods. Video cable may transmit video image to video processor 32 as an analog signal of type CVBS or SVideo. Video processor 32 then converts the analog signal to a digital format, such as YUV. Video processor 32 may store the data in digital format and may compress the data to a streaming video format, such as MPEG2, MPEG4, or MJPEG. Video processor 32 may be connected to a network manager 33. Network manager 33 arbitrates serial communications between devices connected to network manager 33, including ball readers 11 and user interface devices 35.

[104] Each roulette table 10 may be attached to corresponding ball readers 11. Ball readers 11 are known in the art and are sold by a number of casino supply companies. Ball readers 11 detect where the ball stops on a roulette wheel. The outcomes of each stop position are associated with an outcome stored in a memory device. Therefore, by determining the stop position of the roulette ball on the roulette wheel, the ball reader is able to determine the outcome of the game. Ball readers 11 may provide data including start of game data, end of game data, and winning number to network manager 33. Network manager 33 may be connected to user interface device 35. User interface device 35 may allow an operator (not shown) to input reports or data to gaming device 20, including accounting data, player tracking data, and security data.

[105] Ball readers 11, user interface devices 35, and video processors 32 may be connected to corresponding network manager 33 via conventional communication lines allowing transmission of input and output signals, such as RS485. Through network manager 33, ball readers 11, user interface devices 35, and video processors 32 are able to receive communication packets from each other as well as identify the source of communication packets using device addresses.

[106] Network manager 33 may transmit data from ball readers 11 and user interface devices 35

to video processors 32. As shown in figure 12, video processors 32 may transmit data from user interface devices 35 to a table management system 1464. Table management system 1464 may be configured to store and process accounting data, player tracking data, security data, and any other data entered from user interface device 35. Video processors 32 may also send video  
5 images from video camera 30 and data from ball readers 11 to Ethernet hub 50. Ethernet hub 50 may be connected to video server 60 using connections known in the art, as well as later developed techniques. Ethernet hub 50 may transmit video images from video camera 30 and data from ball readers 11 to a video server 60. Video server 60 may combine streaming video data from various video processors 32 with other data from various devices connected to video  
10 server 60 to create one multicast data packet comprising at least one set of roulette games and broadcasts data to a second video processor 34. Second video processor 34 may decompress the multicast streaming data packet and convert video images for display on display devices 22 and 24 of gaming device 20.

#### 15 [107] **Components for Progressive Systems**

[108] With continued reference to figures 11 and 12, gaming device 20 may be in communication with a progressive jackpot controller 70 and a machine interface card 96 to allow progressive gaming. Progressive jackpot controller 70 may be a separate processor from a gaming device 20 processor (not shown) or may be integrated with a gaming device processor. If  
20 progressive jackpot controller 70 is a separate processor, it may be located on gaming device 20, or may be at a remote location.

[109] When player places a progressive wager on gaming device 20, a progressive wager data is sent to machine interface card 96 via serial communications known in the art or discrete pulse

input. Machine interface card 96 may transmit progressive wager data to second video processor 34. Second video processor 34 may transmit progressive wager data to progressive jackpot controller 70.

[110] Progressive jackpot controllers are well known in the art for administering progressive  
5   jackpots. Progressive jackpot controller 70, which may be integrated with a processor (not  
shown) in gaming device 20, may take a predetermined percentage of each progressive wager and  
add it to a progressive prize amount. The progressive prize amount may be sent from progressive  
jackpot controller 70 to second video processor 34 via Ethernet hub 50. Second video processor  
34 may transmit progressive jackpot amount for display on display devices 22 and 24 of gaming  
10   device 20. When gaming device 20 detects a progressive winner, gaming device 20 sends  
progressive winner data to second video processor 34. Second video processor 34 also transmits  
progressive winner data to progressive jackpot controller 70 so that the progressive jackpot  
amount and play information can be reset or adjusted accordingly.

15   **[111] Game Source for Simulated Game Embodiment**

[112] Referring now to figure 13, an embodiment of the present invention is shown wherein  
gaming device 20 offers at least one animated (including simulated games) or previously  
recorded game for the player to play. The number of animated or previously recorded games  
being offered by gaming device 20 may vary. Gaming device 20 may be connected to Ethernet  
20   hub 2906. Ethernet hub 2906 may store animated or taped games.

[113] When the player places a progressive wager on gaming device 20, a progressive wager  
signal and data may be sent to machine interface card 2920 via serial communications known in  
the art or discrete pulse input. Machine interface card 2920 may transmit progressive wager data

to video processor 2914. Video processor 2914 may transmit progressive wager data to progressive jackpot controller 2902. Progressive jackpot controllers 2902 are well known in the art for administering progressive jackpots and may be integrated in a processor (not shown) for gaming device 20.

5    **[114]** Referring now to figures 13 and 14, progressive jackpot controller 2902 may take a predetermined percentage of progressive wagers (referred to as “progressive contributions” 3014) and add it to progressive amount 3018. Progressive amount 3018 may be from progressive jackpot controller 2902 to video processor 2914 via Ethernet hub 2906. Video processor 2914 may transmit progressive jackpot amount 3018 for display on display devices 22 and 24 of  
10   gaming device 20. When gaming device 20 detects a progressive winning event 3016, gaming device 20 may send progressive winner data 3014, 3016, and 3018 to video processor 2914. Video processor 2914 may also transmit progressive winner data 3014, 3016, and 3018 to progressive jackpot controller 2902 so that the progressive jackpot amount 3018 and play can be reset or adjusted accordingly.

15

**[115] Game Play Flowcharts**

**[116] Game Start Flowchart**

**[117]** Referring now to figure 15, a game start process 1500 of at least one embodiment of the present invention is shown. At steps 1502 and 1504, an operator turns on gaming device 20.  
20   First display 22 is activated in step 1506. At step 1508, second display 24 is also activated. Gaming device 20 waits for a player to activate an input device, which is a touch screen 1532 in this embodiment, at step 1510. At step 1524, if gaming device 20 does not receive a touch screen input, then the progressive amount is retrieved from a storage 1522 and the progressive

jackpot information is updated on first display 22.

[118] Once touch screen 1532 is activated, the player has the option to press five different buttons- a first game type button 1512, a second game type button 1514, a game instructions button 1516, a progressive game instructions button 1520, and a cash out button 1526. If first  
5 game type button 1512 or second game type button 1514 is pressed, then a place your bets process 1530 is executed. If instructions buttons 1516 and 1520 are pressed, then an instruction process 1518 is executed. If the cash out button 1526 is pressed, then a cash out process 1528 is executed. Instruction process 1518 and place your bets process 1530 are discussed further below.

10 **[119] Instruction Process Flowchart**

[120] Figure 16 shows a flowchart for instruction process 1518 of an embodiment of the present invention. Instructions may be displayed on second display 24. Instructions may be in a text message form, audio, audio and video combination, or video clips that demonstrate how the game is played. From game start process 1500, gaming device 20 determines the type of  
15 instructions the player selected in steps 1704 and 1708. If the player selected game play instructions, then game play instructions are displayed in step 1706. Otherwise, progressive game instructions are displayed in step 1710. Gaming device 20 next determines if the player wishes to continue and view the next instruction message at step 1712. If the player continues, the next instruction message is displayed in step 1706 or 1710, depending on the type of  
20 instructions the player sought earlier. If the player decides to exit at step 1714, then the control is returned to game start process 1500.



**[121] Place Your Bets Process Flowchart**

[122] With reference to figure 15, in an embodiment of the present invention, when a player selects first game type button 1512 or second game type button 1514, a place your bets process 1530 is executed. Flowchart for place your bets process 1530 is shown in figure 17. At step

5 1602, gaming device 20 retrieves a player's accounting information, which may include bet per table, total bet, and credit meter, from a storage device 1604. At step 1606, gaming device 20 displays the player's accounting information, such as on second display 24.

[123] Place your bets process 1530 waits for touch screen input 1610 from the player at step 1608. If there is no touch screen input, then a progressive jackpot display function 1612 updates  
10 the progressive jackpot amount. Place your bets process 1530 continues until a touch screen input is detected at step 1608. If a touch screen input is detected, then the following series of tests may be performed to identify what element on the touch screen was pressed.

[124] Decision 1616 determines if an item on the roulette field was pressed. If a roulette field item was pressed, then a bets placed process 1618, which is described below, is run. After the  
15 bets placed process 1618 is completed, control is returned to place your bets process 1530 at step 1662. If a roulette field item was not pressed, then decisions 1620, 1622, 1624, and 1626 determine if one of the table selection buttons was pressed. If one of the table selection buttons was pressed, then a table selection process 1628, which is further described below, is run. After the table selection process 1628 is completed, control is returned to place your bets process 1530  
20 at step 1664.

[125] Decision 1630 determines if the player wishes to remove any bets. Decision 1632 determines if the player wishes to clear all bets. If the player wishes to remove any bets, or clear all bets, remove bets process 1634 is executed and control is returned to place your bets process

1530 at step 1672.

[126] Decision 1636 determines if the done betting button was pressed. Decision 1638 further determines if the current game is a live game or a simulated game. If the current version is a live game, then a live game process 1642 is run. If the current version is a simulated game, then a  
5 simulated game process 1640, which is described below, is run.

[127] Decisions 1644, 1646, 1648, and 1650 determine if one of the standard bet amount buttons has been pressed. If it has, then a bet amounts process 1652, which is described below, is run. After bet amounts process 1652 is complete, control is returned to place your bets process 1530 at step 1670.

10 [128] Decision 1654 determines if the progressive bet button has been pressed. If it has, then a progressive bet process 1656 is run. After progressive bet process 1656 is completed, control is returned to place your bets process 1530 at step 1666. If decision 1658 determines that the go to menu button was pressed, then control is returned to start game flowchart 1500.

15 **[129] Bet Placed Process Flowchart**

[130] Referring now to figure 18, a flowchart for bets placed process 1618 of an embodiment of the present invention is shown. Bet placed process 1618 may show the players the bet that they have placed by displaying an icon on the roulette field representative of the bet denomination they have selected. Bet placed process 1618 may update the bet amount information on second  
20 display 24 and stores the bet in a table bet matrix 2022.

[131] From place your bets process 1530, decision 2004 verifies that the player has selected at least one table. If the player has not selected a table, then function 2006 displays an error message. Control is then returned to place your bets process 1530. If the player has selected a

table, then decision 2008 verifies that the player has made a bet. If the player has not made a bet, then function 2010 displays an error message. Control is then returned to place your bets process 1530.

[132] If the player has made a bet, the current bet amount is retrieved from storage 2014 at step 5 2012. Function 2016 then updates the bet per table, total bet, and current bet. Function 2016 also stores the bet per table, total bet, and current bet in storage 2018. Function 2020 then updates the bet per table, total bet, and current bet on second display 24. Next, step 2024 stores the bet in table bet matrix 2022. Function 2026 may display a token representing the bet on the roulette field. Control is then returned to place your bets process 1530.

10

### [133] Table Selection Flowchart

[134] Referring now to figure 19, table selection process 1628 of an embodiment of the present invention is shown. Table selection process 1628 may determine and store the tables that the player has selected. From place your bets process 1530, table selection process 1628 retrieves 15 the current number of selected tables from storage 1806. Decision 1808 determines if the player has selected a table previously. If answer to decision 1808 is yes, then decision 1810 determines if previous table selection was un-highlighted. If so, function 1812 highlights the button selected. Function 1814 stores the new number of tables selected in storage 1806. Control is returned to place your bets process 1530.

20

### [135] Remove Bets Process Flowchart

[136] Referring now to figure 20, remove bets process 1634 of an embodiment of the present invention is shown. Remove bets process 1634 allows a player to remove bets the player

previously placed on the roulette field. Remove bets process 1634 may be limited to allow a player to remove only the last bet placed or all the bets placed from the roulette field. Bet per table, total bet, and current bet displayed on second display 24 are adjusted accordingly.

[137] From place your bets process 1530, process 2204 retrieves accounting and bet table data  
5 from storage 2206 and 2207. Decision 2208 determines whether the player has pressed the clear last bet button on second display 24. If said button was pressed, then process 2210 updates the current bet amount and process 2212 updates the credit amount. Next, process 2214 clears the last bet icon from the roulette field. If decision 2216 determines that the player selected the clear all bets button, then process 2218 clears the bet amounts and process 2220 updates the credit  
10 amount. Process 2222 clears all the bet icons from the roulette field. Process 2224 updates the bet and credits display amounts. These new data values are then stored in storage 2206 and 2207 by process 2228. Control is then returned to place your bets process 1530.

#### **[138] Bet Amounts Process Flowchart**

15 [139] Bet Amounts process 1652 of an embodiment of the present invention is shown in figure 21. Bet amounts process 1652 allows a player to select a bet amount to place bets on the roulette field. The currently selected bet amount is highlighted for the player so the player is informed what the current bet amount is.

[140] From place your bets process 1530, function 1904 retrieves the current bet amount from  
20 storage 1906. Decision 1908 determines if the player has indicated a previous bet amount. If the player has indicated a previous bet amount, then function 1910 un-highlights the button. If the player has not indicated a previous bet amount or after the current bet icon has been un-highlighted, function 1912 highlights the button selected and function 1914 stores the new bet

amount in storage 1906. Control is then returned to place your bets process 1530.

**[141] Progressive Bet Process Flowchart**

[142] Progressive bet process 1656 an embodiment of the present invention is shown in figure

5 22. From place your bets process 1530, decision 2104 verifies that the player has selected all the tables required to be eligible for the progressive jackpot. If the player has not selected all the required tables, then process 2106 displays an error message and control is returned to place your bets process 1530. If the player has selected the required amount of tables, then decision 2108 determines if a previous progressive bet has been made. If a previous progressive bet has been  
10 made, then process 2110 removes the previous progressive bet icon from the roulette field. Process 2112 then stores the progressive bet in a table bet matrix storage 2114. The new progressive bet icon is displayed on the roulette field by process 2116. Control is then returned to place your bets process 1530.

15 **[143] Live Game Process Flowchart**

[144] Referring now to figure 23, a live game process flowchart 2700 of an embodiment of the present invention is shown. Live game process 2700 controls the roulette video terminal after players have selected what tables they want to play, placed their bets on the roulette field, and selected the done betting button. Live game process 2700 displays live video of the tables that  
20 are selected along with the status of the table. If a roulette game is currently in progress, then a timing function may be executed by which the system waits until the current game is finished before displaying the live video. The timing function may place the player's wagers on the next games played. After all the roulette games for the selected tables have finished, the player can

start another roulette game.

[145] From place bets process 2704, function 2706 may display live video of the selected roulette tables on the overhead display as shown in figure 7 items 1200, 1202 and 1204.

Decisions 2708, 2710, 2712 check if a current roulette game is in progress on the live roulette

5 table. If a roulette game is not in progress on the live roulette table, then functions 2714, 2716

and 2718 direct their respective tables to start a game. Decisions 2720, 2732, 2744 determine

which tables were selected for this round of game play. If tables were selected, then decisions

2722, 2734, 2746 verify that the current roulette game has finished. If the game has not finished,

then functions 2730, 2742 and 2754 update the table status as shown in figure 7 items 1210,

10 1208, 1206. If the game has finished, then function 2724, 2736, 2748 update the winning

numbers on the overhead display and functions 2726, 2738, 2750 store the winning numbers in

storage 2728, 2740, 2752. Function 2756 updates the progressive jackpot amount on the

overhead display with the progressive jackpot amount in storage 2758. Decision 2762

determines if all the selected tables have finished. If any table games remain in progress, then the

15 process starts over with function 2706. If all the roulette games have finished, the win

determination process 2760 is run. Win determination process 2760 is discussed below.

#### [146] Simulated Game Process Flowchart

[147] Referring now to figure 24, simulated game process 1640 of an embodiment of the

20 present invention is shown. Simulated game process 1640 controls the roulette video terminal

after the player has selected what tables the player wants to play, placed bets on the roulette field,

and then selected the done betting button. Simulated game process 1640 starts the wheels

spinning for all the tables that have been selected, determines the wheel spin outcome, detects

when the wheels have finished spinning and displays the outcome on first display 22.

[148] From place your bets process 1530, function 2306 may displays “good luck” and “game in progress” messages on first display 22 and a “game in progress” message on second display

24. Decisions 2308, 2312 and 2316 determine the tables the player has selected. Processes

5 2309, 2313 and 2317, using a random number generator, determine the outcome for the selected tables.

[149] The roulette wheel spinning animations that represent the outcomes that were randomly determined are retrieved from storage 2315. Processes 2310, 2314 and 2318 display spinning wheels from selected tables on first display 22. Decisions 2320, 2330, and 2340 determine what

10 tables are spinning and decisions 2322, 2332, and 2342 determine whether the wheels are still spinning. If a wheel has stopped, then processes 2324, 2334, and 2344 display the outcome on first display 22. The outcomes are then stored in storage 2328, 2338, and 2348 by processes 2326, 2336 and 2346. The progressive jackpot amount on first display 22 is updated by process 2350 with the amount stored in storage 2352. After decision 2354 has determined that all the  
15 wheels have stopped spinning, a win determination process 2356 is run.

#### [150] Win Determination Process Flowchart

[151] Figure 25 shows a win determination process 2356 of an embodiment of the present invention. Win determination process 2356 controls the roulette video terminal after the roulette  
20 game has finished. It compares the numbers that the player has bet versus the outcomes from the tables that the player selected to determine if the player has won. If the player has won, then win determination process 2356 calculates the win amounts for each table and updates the win amounts for each table on second display 24. The process then compares the game outcomes

versus the player's progressive bet to verify if the numbers match and keeps count of the number of matches.

[152] After the entire winner verification process is complete, the count of progressive matches is compared against the number needed to win the progressive jackpot. If they are equal, then a progressive winner process 2478, which is described below, is run. If the progressive jackpot is not won, then the winnings for all the tables are accumulated, stored and displayed on second display 24. The process then waits for touch screen input from the player to play another game with the same bets or new bets, or a touch screen input from the player to return to the main menu.

[153] From simulated game process 1640 (depicted in figure 24), decisions 2404, 2428, and 2452 determine the tables the player has selected. Processes 2406, 2430, and 2454 compare the outcome from storage 2408, 2432, and 2456 with the table bet matrix from storage 2410, 2434, and 2458. If the numbers match, as determined by decisions 2412, 2436, and 2460, then the win amount for each table is calculated by processes 2414, 2438 and 2462. Win amounts displayed on second display 24 are updated by processes 2416, 2440 and 2464.

[154] Functions 2418, 2442, and 2466 compare the progressive bet number from storage 2420, 2444, and 2468 against the outcome for each table from storage 2408, 2432 and 2456. If the first table's outcomes match the progressive bet, then function 2424 sets the progressive match value 2426 to one. If the second or third table's winning number matches the progressive bet then the progressive match counter 2450 or 2474 is incremented by function 2448 or 2472.

[155] Decision 2476 determines if the number of progressive matches equals the number required to win the progressive jackpot amount. If it does, then progressive winner process 2478, which is described below, is run. If not, then function 2480 calculates the total win amounts and



stores them in storage 2482. Function 2484 displays the total credit amount on second display 24.

[156] The process then waits for user input 2486 from the touch screen. If there is no user input 2486, then the progressive display is updated by function 2488. If touch screen input is detected, and decision 2490 verifies that it the player has selected the new bets button, then new bets process 2492 is run. If decision 2494 determines that the player has selected the same bets button, then simulated game process 1640 is run again with the same bets.

#### [157] Progressive Winner Process Flowchart

[158] Figure 26 shows progressive winner process 2478 of an embodiment of the present invention. From win determination process 2356, progressive winner process 2478 disables the roulette video terminal play at step 2604, sends a progressive jackpot hit to the jackpot controller at step 2606, and displays the progressive winner message on first display 22 at step 2608. Progressive winner process 2478 preferably waits for a jackpot reset key 2611 to be turned at step 2610 before the roulette video terminal is enabled for game play at step 2612. Control is then returned to game start process 1500.

#### [159] CONCLUSION

[160] The present invention provides a gaming device and methods of play that have long been needed but unmet by prior art. Certain embodiments of the present invention allow a game player to have on set of wagers, as selected by the player, placed on several games going at the same time without confusing or slowing down play. It also allows additional betting opportunities. It further allows game players to apply the same wagering scheme to multiple

games. It allows game operators to accommodate all players wishing to play popular table games.

It allows game players to play at their own pace. Additionally, it provides game lessons to the game player upon the player's demand.

[161] Although the description above contains many specifications, these should not be

5 construed as limiting the scope of the invention but as merely providing illustrations of some of the presently preferred embodiments of this invention. For example, connections between components of gaming device are not be limited to cables, but may include wires, phone lines, fiber optics, wireless methods, or other methods known in the art. Gaming devices are not necessarily limited to being confined within a casino facility. Gaming devices may be remotely  
10 located, and may communicate with its components using internet connections. Thus, the scope of the invention should be determined by the appended claims and their legal equivalents rather than by the examples given.